Extract from: State of the Natural Environment Report

2. Summary

This is the first attempt to assess the condition of Gloucestershire's natural environment since the County Council published its report "Gloucestershire's Environment" in 1996. The current document commences with a précis of the 1996 report to identify what were considered to be key environmental issues at that time. Climate change had only just become an issue but the County Council had signed "The Climate Resolution" and pledged to achieve - by 2005 – a 30% reduction of carbon dioxide emissions from the 1990 level.

The term biodiversity had not made its way into our vocabulary. We still talked about wildlife and the plethora of plans which followed the Earth Summit in Rio was not yet upon us. The report found little hard data on which to base an assessment of the county's wildlife but did list, by taxa, the number of species known to be present in the county. There was nothing on which to base an assessment of habitat condition.

Foot and Mouth disease had yet to hit the county and there is no mention of bovine TB. At that time 7% of our waste was being recycled and 3% composted. Flood risk got a brief mention with the NRA identifying 119 locations in the county at risk from flooding. There were proposals for a wind turbine at Nymphsfield and to harness the power of the tide from the River Severn. Agri-environment schemes were in their infancy and there was development pressure from bypasses (Lydney and Brockworth) and an increasing number of golf courses.

The report had strong aspirations of establishing a baseline. It was to be the start of a process to carry out on-going monitoring of Gloucestershire's environment. But the necessary structures were never developed. No formal baseline was ever set and as such the current report has struggled to give a comprehensive view of how our environment has fared in the intervening 15 years. In particular we have little quantitative evidence of the condition of wildlife habitats outside of statutory sites, and this is worrying given that these constitute only a small proportion of land cover in the county. The evidence presented in the current report, however, suggests significant ecological change in the nature of Gloucestershire's countryside.

The Gloucestershire Biodiversity Action Plan – identifying priority habitats and species for action – was produced in 2000. For the past 10 years it has set the conservation agenda for the county. The county is recognised as being rich in special wildlife habitats but this is not fully reflected in the statutory protection given to sites in the county. International and European designations give the highest level of site protection and in total 8 sites in Gloucestershire are covered by such designations. For a site to receive the highest level of protection it first

has to be identified as a Site of Special Scientific Interest (SSSI) – the highest level of national protection to be afforded to a site. There are 122 SSSIs in Gloucestershire covering approximately 8863 ha (over half of which by area is the Severn Estuary). This equates to 3.3% of land cover which is much less than the national average of 7%. Given the high level of recognition for the county's wildlife this looks like under-protection.

The bulk of the SSSIs in the county were designated by the end of the 1980s and very few have been designated since. In the meantime English Nature (now Natural England) has put considerable effort into securing favourable condition for the suite of SSSIs and the county has a higher than average proportion of its SSSIs in favourable condition – just over 90%. The main issues preventing the remaining sites from achieving favourable status are scrub encroachment on grassland due to lack of grazing; diffuse pollution from agricultural run-off and coastal squeeze (inappropriate coastal management combined with sea level rise).

In contrast to statutory sites Gloucestershire has in excess of 900 "Key Wildlife Sites" designated or awaiting assessment, covering three times the area covered by SSSIs. Although not protected by law many of these sites have an ecological value equal to that of SSSIs but we do not have the same level of information about KWS. The last assessment of whether KWS were in active management was carried out in order to report on National Indicator 197 in 2010. At that time 40% were considered to be under active management. As this was a desk study, however, there is no way of telling whether the management being carried out is actually appropriate to the requirements of the site.

The results of a pilot Phase 1 (land use) survey are reported in the current document, compared with a similar survey carried out in the early 1970s. In the samples analysed to date land use has changed considerably between the two surveys and for the first time we have been able to quantify habitat loss in the county. Within two sample squares alone in the Arlingham/Quedgeley area unimproved (species –rich) grassland had declined by 69%; traditional orchards by 69% and parkland (pasture with veteran trees) by 75%. At the same time arable had increased by 285% and urban by 182%. Woodland and scrub had increased by 285% but this was largely as a result of neglect of marginal grassland and orchards. The average field size had increased for land put down to arable and with this there was a corresponding loss of hedgerows. There is every likelihood that the level of land use change and habitat loss is reflected across much of the county, especially in the Severn Vale and on the Cotswold plateau.

The report looks in detail at a few species where sufficient data exists to comment on trends. Otters have made a remarkable recovery during the past 15 years, from being virtually absent from the county to now being present on practically every river catchment. It is unfortunate, however, that the presence of

this secretive species in the county is often recorded as a result of road casualty animals.

Butterflies on the other hand have suffered some significant losses, reflecting the national trend for many species. The small-pearl-bordered fritillary, once common in the Forest of Dean, is now limited to just three locations and extinction of the Gloucestershire population is likely if urgent action is not taken. The native white-clawed crayfish is present now in just a few river stretches in the county where it is vulnerable to disease carried by the now widespread signal crayfish – a non-native species introduced and farmed.

Bird species give a good indication of the broader condition of the countryside and we are fortunate in the county in having comparable data for three surveys carried out 20 years apart in the late 60s; the late 80s and in progress at the moment. The results again reflect national trends. While 22 species have shown consistent declines 15 have been increasing. Those decreasing, however, are clearly tied to habitat loss, such as lesser spotted woodpecker which is closely associated with orchards. In contrast many of those species on the increase are taking advantage of human activity (herring gull, lesser black-backed gull); less persecution (peregrine, goshawk, raven) or are the results of introduction (red kite). Little egret is new to the county and is now widespread throughout much of southern and central England – a species spreading its range from Europe possibly as a result of climate change.

There has been a flurry of activity in the last 5 years and more survey and monitoring has taken place. Baselines are just being established for certain aspects of our natural environment so we are in a good position going forward to look strategically at what we need to do to identify trends. We must not lose momentum, as happened after the publication of the 1996 report.

Recommendations:

1. Establish a framework under GEP (or its successor) for the effective monitoring of the state of the natural environment in Gloucestershire

2. Recognise as a priority issue the need to find out more about the state of Gloucestershire's Key Wildlife Sites and continue an improved version of NI 197 reporting

3. Seek to achieve up-to-date county-wide Phase 1 survey coverage to give a greater understanding of the changes that have taken place and to inform future land use and restoration projects

4. Elevate the importance of the natural environment relevant to other environmental issues and encourage greater consideration of the natural environment in policies and by decision makers